

AMENDMENTS TO THE SPECIFICATION

Please replace paragraphs [0006]-[0007] with the following paragraphs.

[0006] The present invention resides in a scalable high power laser source of which the output wavelength can be shifted to a desired region, such as the visible or ultraviolet regions of the spectrum. Briefly, and in general terms, the invention is embodied in a laser array architecture comprising an array of laser fiber amplifiers; a master oscillator generating a pump signal at a fundamental frequency; means for coupling the pump signal into each of the laser fiber amplifiers; at least one array of nonlinear ~~linear~~ crystals functioning as harmonic generators; and means for coupling amplified pump signals from the laser fiber amplifiers into respective nonlinear ~~linear~~ crystals, which generate an array of output sub-beams at a desired harmonic frequency. The laser array architecture further comprises means for detecting phase differences in the output sub-beams, and a plurality of phase modulators for adjusting the phases of the laser amplifier input signals in response to the detected phase differences, resulting in phase coherency among the output sub-beams.

[0007] The at least one array of nonlinear ~~linear~~ crystals may be a single array functioning as second harmonic generators (SHGs), providing an output at the second harmonic frequency. Alternatively, the at least one array of nonlinear ~~linear~~ crystals may comprise multiple cascaded arrays, configured as desired to provide a selected higher order harmonic of the fundamental frequency. For example, a second cascaded array of nonlinear crystals may be a second set of second harmonic generators, giving a fourth-harmonic output. In an alternate embodiment of the

invention, a second cascaded array of nonlinear crystals function as a sum frequency generators, mixing the second harmonic with the fundamental to provide an output at the third-harmonic frequency. Other combinations of cascaded second harmonic generators and sum frequency generators can be used to generate output at a desired harmonic frequency.